

Notice of Allowability

Application No.

10/521,377

Examiner

Chukwuma O. Nwaonicha

Applicant(s)

KORNEK ET AL.

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 18 October 2006.
2. ☒ The allowed claim(s) is/are 9-16 and 18-22 (now renumbered 1-13, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

DETAILED ACTION

Current Status

1. This action is responsive to Applicants' amendment of 18 October 2006.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 9-16 and 18-22 are under active consideration in the instant application.
4. The rejection of 9-16 and 18-22 under 35 U.S.C 103 as being unpatentable over Tonomura et al., {US 6,359,161} for the reasons set forth in the previous Office Action of 7/18/05 has been withdrawn because Tonomura et al. do not teach all the limitations of the claimed invention.
5. The obviousness-type double patenting rejection of claims 9-16 and 18-22 is withdrawn because applicants have filed a Terminal Disclaimer.

Allowed Claims

Claims 9-16 and 18-22 are allowable over the prior art of record.

Reason For Allowance

The following is an examiner's statement of reasons for allowance:

Applicants claim a process of continuous preparation of organo silane by reacting silane with an alkene in the presence of an iridium catalyst. The process is carried out at a temperature of about 30°C to about 200°C and the reaction pressure is 0.11 – 50.0 Mpa. The process employs a co-catalyst with a concentration of 1×10^{-6} to 1 mole %, based on the silane component; and all the variables are as defined in the claims. The process was neither found to be obvious nor anticipated by the prior art of record.

The closest prior art is Tonomura et al., {US 6,359,161}. Tonomura et al. teach a process for preparing halopropyldimethylchlorosilane by reacting dimethylchlorosilane with an allyl halide in the presence of an iridium catalyst. The reaction is effected in the presence of an internal olefin compound, typically, 1,5-cyclooctadiene. The internal olefin compound suppresses deactivation of the iridium catalyst during reaction. Using a smaller amount of the iridium catalyst, the process produces the halopropyldimethylchlorosilane in high yields. The reaction was conducted at about 0°C to about 200°C and catalyst concentration of 0.000001 to 0.1 mole. The co-catalyst employed is 0.004 mole.

Applicants' process of continuous preparation of organo silane by reacting silane with an alkene in the presence of an iridium catalyst differs from the prior art process in that applicants' employ a continuous reaction instead of batch reaction, and by employing a slight excess of alkene, applicants are able to increase the yield to very high values instead. Additionally, applicants process for the preparation of silane compound differ from Tonomura et al. process in that applicants employ a silane compound of Si-H while Tonomura et al. teach a process that employed a different silane compound of Si-C. The unexpected result and the use of different reagents are not readily apparent and would not have been suggested to one of ordinary skill.

All claims (9-16 and 18-22) are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
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